
Name of Organization: Macomb County Health Department

Type of Organization: County

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Project Title: Mercury Thermometer Exchange Program

Project Category: Pollution Prevention and Reduction - BNS

Rank by Organization (if applicable): 0

Total Funding Requested (\$): 75,000 **Project Duration:** 2 Years

Abstract:

The Macomb County Health Department, Environmental Health Services Division, is seeking funding to support a mercury thermometer exchange program. This will be primarily a community exchange, focusing on people who use the walk-in services of the Health Department. In addition to walk-in clients, the County will enlist the assistance of pediatricians and will target County employees. The marketing of the program will be accomplished by distributing pamphlets and displaying signs in County buildings and pediatrician's offices, with particular emphasis on the Health Department facilities in Mount Clemens, St. Clair Shores, and Warren. The existing Household Hazardous Waste (HHW) Program will also serve as a mechanism for increasing participation.

The County intends to provide replacement non-mercury thermometers, rather than vouchers, to ensure greater citizen participation. A digital thermometer has been selected as a replacement. An estimate of the likely level of participation incorporates the number of households participating in the HHW program, the number of county employees, and the number of walk-in clients at the Health Department. We estimate that 10,000 thermometers will be exchanged for each year of the program.

Geographic Areas Affected by the Project

States:

<input type="checkbox"/> Illinois	<input type="checkbox"/> New York
<input type="checkbox"/> Indiana	<input type="checkbox"/> Pennsylvania
<input checked="" type="checkbox"/> Michigan	<input type="checkbox"/> Wisconsin
<input type="checkbox"/> Minnesota	<input type="checkbox"/> Ohio

Lakes:

<input type="checkbox"/> Superior	<input checked="" type="checkbox"/> Erie
<input type="checkbox"/> Huron	<input type="checkbox"/> Ontario
<input type="checkbox"/> Michigan	<input checked="" type="checkbox"/> All Lakes

Geographic Initiatives:

<input type="checkbox"/> Greater Chicago	<input type="checkbox"/> NE Ohio	<input type="checkbox"/> NW Indiana	<input checked="" type="checkbox"/> SE Michigan	<input checked="" type="checkbox"/> Lake St. Clair
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Primary Affected Area of Concern: Clinton River, MI

Other Affected Areas of Concern: Detroit River, MI

For Habitat Projects Only:

Primary Affected Biodiversity Investment Area:

Other Affected Biodiversity Investment Areas:

Problem Statement:

Mercury is a contaminant of concern in the Clinton River watershed and throughout the Great Lakes basin. Fish consumption advisories are in place for several fish species because of high mercury concentrations in fish tissue. In recognition of this problem, sediment sampling programs are being planned to evaluate the extent of mercury contamination in the near-shore areas of Lake St. Clair. Mercury containing fever thermometers are often cited as the largest single source of mercury discarded in the municipal solid waste stream, and because of the danger of mercury exposure they are a potential household safety problem.

This project is worthy of funding for several reasons:

- the rationale/relevance/basis for action for the program is the well-recognized problem of mercury emissions from landfills and incinerators and the resultant water quality problems associated with the bioaccumulation of mercury
- the program supports the goals of the BNS
- it supports green technology by reducing the generation of a persistent bioaccumulative substance
- it addresses the specific needs of the Clinton River Area of Concern by reducing mercury discharges to Lake Erie and St. Clair/Lake St. Clair/Detroit River basins, where beneficial use impairments exist due to mercury bioaccumulation.

Proposed Work Outcome:

The County intends to provide replacement non-mercury thermometers, rather than vouchers, to ensure greater citizen participation. A digital thermometer has been selected as a replacement. This model offers the option of including an embossed logo to identify the County and USEPA as the source of funds for the program.

An estimate of the likely level of participation incorporate the number of households participating in the HHW program, the number of county employees, and the number of walk-in clients at the Health Department.

We estimate that 10,000 thermometers will be exchanged for each year of the program, thereby removing 20,000 mercury-containing thermometers from the waste stream. With each thermometer containing about 0.5 grams of mercury, this program could prevent 10 kilograms of mercury from entering the environment. This amount of mercury is enough to contaminate thousands of tons of sediment.

Project Milestones:

Dates:

Project Start	10/2000
Prepare brochures and posters	12/2000
Acquire non-mercury thermometers	12/2000
Arrange reclamation of Hg thermometers	12/2000
Begin exchange program	01/2001
Begin quarterly evaluations	01/2001
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Project End	09/2002

☒ Project Addresses Environmental Justice

If So, Description of How:

The primary participants in the exchange program will be those economically disadvantaged families receiving services in County programs such as the Women, Infants and Children (WIC) program, public health clinics, and maternal and child health programs.

☒ Project Addresses Education/Outreach

If So, Description of How:

Brochures will be produced and distributed to the public through a variety of mechanisms, such as the Department's walk-in clients, participants in the Women, Infants & Children's (WIC) program, and participants in the existing Macomb County Household Hazardous Waste Program. Informational pamphlets will also be distributed with each non-mercury thermometer. Descriptive posters will be displayed in County facilities and pediatrician's offices.

Project Budget:

	Federal Share Requested (\$)	Applicant's Share (\$)
Personnel:	0	25,000
Fringe:	0	8,250
Travel:	0	0
Equipment:	0	0
Supplies:	70,000	0
Contracts:	0	0
Construction:	0	0
Other:	5,000	0
Total Direct Costs:	75,000	33,250
Indirect Costs:	0	3,750
Total:	75,000	37,000
Projected Income:	0	0

Funding by Other Organizations (Names, Amounts, Description of Commitments):

Description of Collaboration/Community Based Support:

The programs currently in place at the MCHD will provide the support necessary to make this a successful program. The Personal Health Services program and the general focus on hospitals and the medical community constitute an important base of community support.